

**Rejection Under 35 U.S.C. § 103(a)**

The Examiner has rejected claims 1-11 and 13 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,001,192 ("Lallier") in view of U.S. Patent 5,599,954 ("Mitsubishi"). Applicants respectfully traverse this rejection.

"To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." Manual of Patent Examining Procedure § 2143.03 (8th ed., rev. 2, May 2004) (hereinafter "M.P.E.P."). Applicants respectfully submit that a prima facie case of obviousness has not been established.

Lallier discloses paint stripping compositions comprising (a) an aprotic polar solvent, and (b) an ether. Lallier also teaches conventional additives for its paint stripping composition, one of which is an activator. The activator in Lallier is entirely optional and is listed as just one in a long list of possible additives such as co-solvents, fire-proofing agents, thickeners, stabilizers, surfactants, evaporation inhibitors, and any additive that is not a chlorine-containing solvent. Lallier, col. 2, ll. 38-48. Moreover, Lallier does not identify any particular activators for use with its paint stripping composition. Thus, Lallier differs from the claimed invention because Lallier fails to teach or suggest "(c) at least one activator (TA) comprising at least one reactive -NH<sub>2</sub> and/or -NH- nitrogenous function, of molar volume less than 100" as required by the claims.

To remedy this deficiency, the Examiner cites Mitsubishi for a specific teaching of an activator. Mitsubishi relates to N-substituted-7-amino-5-hydroxy-3-oxoheptanoic acid derivatives and a method for producing the same. Mitsubishi, col. 1, ll. 8-10. According to Mitsubishi, N-substituted-7-amino-5-hydroxy-3-oxoheptanoic acid derivatives are useful as synthetic intermediates for preparing 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors known as antilipemic agents, namely, trans-6-[2-substituted pyrrole-1-yl) alkyl]-4-hydroxypyran-2-one derivatives. Mitsubishi, col. 1, ll. 10-15. In particular, the Office

Action points to col. 6, ll. 59-65 to supply the activator not taught by Lallier. The Office Action points to the imidazole ester activator taught for converting the N-substituted-5-amino-3-hydroxypentanoic acid of the general formula (2) with a metal salt of malonic acid monoester of general formula (3) to produce compound (1), which is a synthetic intermediate for HMG-CoA reductase inhibitors.

The Office Action concludes based on the teachings of Lallier and Mitsushashi that the claimed invention is obvious asserting that "it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have employed the activators, as taught by Mitsushashi, in the composition of Lallier, because the use of an ether activator,<sup>1</sup> such as imidazole, would have activated the reaction forward and would have yielded the product better." Office Action, page 3. Applicants respectfully disagree and submit that the Office Action has failed to set forth a prima facie showing of obviousness.

The Patent Office appears to view the "activators" of Mitsushashi as obviously employable as the "activator" in Lallier "because the use of an ether activator, such as imidazole, would have activated the reaction forward and would have resulted in better yield of product" (page 3 of Official Action). There are at least two problems with this conclusion. First, Lallier does not disclose an "ether activator" but rather discloses an "ester activator." Second, Mitsushashi only calls for use of its activator in a very defined situation namely, "When the R<sup>3</sup> is a protecting group of the hydroxyl group and R<sup>4</sup> is a hydrogen compound in the starting compound (2), in other words, when the compound (2) is (2-c)." In such instance, "the compound of formula (1) of the present invention can be obtained by condensing the starting compound (2-a) with a metal salt of a malonic acid monoester (3)." More particularly, the compound (2-c) is dissolved in a solvent selected from esters such as ethyl acetate, propyl acetate and butyl acetate, ethers such as tetrahydrofuran and diethyl ether, acetonitrile and mixtures of these solvents.

Two conclusions can be reached from the portions of Mitsushashi cited above. First, Mitsushashi employs an activator in a very specific situation relating to the particulars of the

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<sup>1</sup> It is noted that Mitsushashi teaches an "ester activator" and not an "ether activator" as stated in the Office Action. See Mitsushashi, col. 6, line 63.

intermediates selected in a particular condensation reaction scheme, which would have completely failed to inform one of ordinary skill in the art as to whether such activator was appropriately employed in Lallier. Second, and as discussed in somewhat more detail below with regard to analogous art, an “activator” as a component of a paint remover serves a very different function than an activator as a component of a system for synthesizing a biological molecule by condensation. For instance, Lallier differs from the present invention because it has as its objective the removal of paint from wood and metal surfaces without affecting the surface of those substrates.

While it is indeed true that both references fortuitously employ the same term, “activator,” it should be apparent that their functionality is completely different such that one of ordinary skill in the art would not have seen the desirability, and thus the obviousness of employing one as a substitute for another. In the context of the paint remover of Lallier, the point of the activator is to facilitate breakdown and dissolution of the paint. In the context of Mitsuhashi, the point of the activator is not to facilitate a breakdown but a synthesis. These are antithetical principles of operation and belie their interchangeability.

The Office Action states that, “[w]ith respect to the use of the composition for surface treatment of polyester resin, it has been held that recitation on intended use would have no significant patentable weight.” Office Action at 3. While Applicants agree that it is not permissible to rely on recited uses for the compositions in the claims, this is fundamentally different from arguing the functionality of the components in the references as a reason why one of ordinary skill in the art would not be motivated to combine the teachings of those references.

Applicants respectfully submit that the rejection is also improper for the reason that neither Lallier nor Mitsuhashi is analogous prior art. A person of ordinary skill in a particular field of endeavor would not likely know about prior art in a different and unrelated field of technology. Such art, therefore, would not have rendered an invention obvious. For purposes of evaluating the obviousness of claimed subject matter, one must make certain that a particular reference relied upon constitutes “analogous art.” *In re Clay*, 966 F.2d 656, 658-59, 23 U.S.P.Q.2d 1058, 1060-61 (Fed. Cir. 1992). In *Clay*, the Federal Circuit espoused a two-prong test inquiring:

(1) whether the art is from the same field of endeavor, regardless of the problem addressed, and

(2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

*Id.*

Neither Lallier nor Mitsunashi are within the same field of endeavor as the present invention—or even within the same field of endeavor as each other. Lallier is directed to removing paints and coatings from surfaces, and Mitsunashi is directed to intermediates for forming HMG-CoA reductase inhibitors. Applicants respectfully submit that only by impermissible hindsight reconstruction could the Office Action suggest that a person of ordinary skill in the adhesive arts would have found it obvious to combine a teaching mentioned in passing from the paint-related art with a teaching from the enzyme inhibitor-related art to arrive at the instant invention in the adhesive-related art. *See Sensonics Inc. v. Aerosonic Corp.*, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996)(“To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction- an illogical and inappropriate process by which to determine patentability.”).

Furthermore, neither Lallier nor Mitsunashi is “reasonably pertinent to the particular problem with which the inventor is involved.” Neither of these teachings are pertinent to the “cold preparation of laminated composite materials based on polyester resins in order to confer to them without preliminary sanding or abrasion a surface state suitable for adhesive bonding with a polyurethane adhesive” as is set forth in the claims. Yet, the Office Action implausibly implies that a person of ordinary skill in preparing surfaces for adhesive bonding would also have been a skilled paint removal specialist and biochemist. To the contrary, a person of ordinary skill in the art would not have thought to combine the teachings of Lallier and Mitsunashi in any way, let alone have found it obvious to combine these disparate teachings to achieve the present invention in an unrelated field of endeavor.

Additionally, the activator in Lallier is entirely optional and is listed as just one in a long list of possible additives such as co-solvents, fire-proofing agents, thickeners, stabilizers,


surfactants, evaporation inhibitors, and any additive that is not a chlorine-containing solvent. Lallier, col. 2, ll. 38-48. Thus at most, the use of the activator of Mitsuhashi with the composition of Lallier would have been “obvious to try.” But “obvious to try” is not the standard. *See In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988)(“One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention.”). Nothing in either Lallier or Mitsuhashi would have motivated one of ordinary skill in the art to select the claimed activator, namely, an activator comprising at least one reactive -NH<sub>2</sub> and/or -NH- nitrogenous function of molar volume less than 100 from a teaching relating to HMG-CoA reductase inhibitors and then combine it with the paint stripping composition of Lallier. The asserted motivation (i.e., to activate the reaction forward) applies equally to all activators and would not lead a person of ordinary skill in the art to the claimed invention. “The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure.” M.P.E.P. § 2143 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Accordingly, the rejection of claims 1-11 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Lallier in view of Mitsuhashi must be withdrawn.

Claims 6-8 further distinguish over the teachings of Lallier and Mitsuhashi for the following reasons. The Examiner asserts that Lallier teaches that the aprotic polar solvent and the ether are present in a volume ratio of 50/50 referring to col. 2, line 10 of Lallier. However, neither claim 6 nor claims 7-8 are directed to a volume ratio of the aprotic polar solvent and the ether that corresponds to a 50/50 ratio. In particular, the ratios in claim 6 specify the composition of the aprotic polar solvent, the ether, and the activator. However, nothing in the cited art teaches or even remotely suggests the amount of activator to use. With respect to claim 7 (and 8, which depends from 7), which specifies a ratio of dimethylsulfoxide (DMSO) and dimethylformamide (DMF), the Office Action cites the 50/50 ratio of aprotic polar solvent to ether taught by Lallier. Applicant respectfully submits that the ratio of aprotic polar solvent to ether is completely irrelevant to the claimed ratio of polar aprotic solvents DMSO and DMF. “To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” M.P.E.P. § 2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). The limitations of claims 6-8 are not found in the prior art.

Accordingly, the rejection of claims 6-8 under 35 U.S.C. § 103(a) as being unpatentable over Lallier in view of Mitsuhashi must be withdrawn.

Applicants submit that this response addresses all of the issues raised in the Office Action and respectfully requests reconsideration of the claims in view of these remarks.

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